MEMORANDUM

Department of Environmental Quality
Division of Water Resources

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SUBJECT: **Ground Water Withdrawal Technical Evaluation Criteria**

TO: **Robert Burnley, Rick Weeks, Frank Daniel, Gerry Seeley, David Borton, Robyne Bridgman**

FROM: **Terry Wagner**

DATE: **September 8, 2005**

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Until recently the primary technical criteria that has been considered when making the determination regarding issuance or denial of new, expanded or renewed ground water withdrawal applications has been the "80% criteria" contained in 9VAC25-610-110.D.3.h. This criterion requires that the predicted impact of a proposed withdrawal be evaluated at one half the distance to the predicted one foot drawdown contour. Predicted drawdown at those locations must be above an imaginary surface that represents the elevation of the potentiometric surface when 80% of historically available head in a confined aquifer is removed (critical surface). The result of this evaluation technique results in approvals of permit applications where the 80% criterion is violated at distances greater or less than the evaluation points.

An unintended consequence of the application of this section is that the renewal of existing permitted withdrawals that are not requesting increased withdrawals may violate this criterion based solely on the location of the facility in relation to areas where potentiometric surfaces are predicted to be below this critical surface based on evaluations of the impact of all permitted and lawful withdrawals. This consequence is in direct contradiction to 9VAC25-610-110.D.3 which requires that permits only be issued when "the applicant's proposed withdrawal will have no significant unmitigated impact on existing ground water users".

The most recent evaluation of the impacts of total permitted and other lawful withdrawals (2003 water use data) predicts potentiometric surfaces below the critical surface in the middle Potomac, upper Potomac, Aquia, Chickahominy-Piney Point, and Yorktown-Eastover aquifers. Beginning immediately, all applications for new or expanded ground water withdrawal permits where the predicted area of impact includes any area where the evaluation of total permitted and lawful withdrawals indicates a potentiometric surface below the critical surface or where additional areas are predicted to fall below the critical surface will be recommended for denial. Since the recommendation will be originally based on the outputs of a regional model, each decision that results in a recommendation for denial will be further evaluated to determine, to the extent possible, actual aquifer conditions in the specific areas of interest. The basis for such decisions to deny ground water withdrawal applications will be based on 9VAC25-610-

110.D.3.

This action does not address the original topic of existing permits that can not be reissued in compliance with the 80% criterion. Section 62.1-266.C of the Code of Virginia allows an applicant for renewal to continue to withdraw under the authority of an existing permit until such time as the Agency takes action on an application for renewal that was submitted in a timely fashion. In cases where an existing permittee applies for renewal at a withdrawal rate equal to or less than their existing permitted rate, and the technical evaluation results in a decision to deny such application, the final recommendation will be to administratively continue the decision and allow the permittee to continue to withdraw under the authority of their existing permit until such point in time that the Agency can take appropriate actions necessary to allow the issuance of such permits. Potential actions include consideration of modification of existing regulatory technical criteria and consideration of reducing current permitted withdrawal amounts for permittees who have not utilized the entire amount of ground water withdrawal authorized by existing permits.

It is very important to remember that we are evaluating predicted impacts that will occur if all lawful rights are exercised. Since all lawful users are not currently withdrawing their entire permitted amounts, the predicted impacts to aquifers have not occurred and can not be directly measured. There are several actions that are currently being contemplated to mitigate the potential for these impacts to occur in the future and that will hopefully allow the issuance of renewed permits to all existing users for the amount they have historically used. All the actions discussed below will require significantly more resources within the Ground Water Withdrawal Program and the agency is in the process of preparing a budget request to seek these resources.

9VAC25-610-310.B.2 allows ground water withdrawal permits to be amended when ground water withdrawal reports submitted by the permittee indicate that the permittee is using less than 60% of the permitted withdrawal amount for a five-year period. About 65 permittees have been identified that meet this criterion and significant reductions in total ground water withdrawal permitted amounts may accrue from such amendments. This potential reduction in total permitted amounts will mitigate but may not eliminate the areas where predicted potentiometric surfaces are below the critical surface. The evaluation of these existing permits will have the same impact as the receipt of 65 new ground water withdrawal applications, therefore requiring additional resources.

Consideration will be given to amending the current regulations to remove or reword the existing 80% criterion contained in 9VAC25-610-110.D.3.h. While I am comfortable that 9VAC25-610-110.D.3 gives us the authority to take the actions described above, it would be preferable to eliminate or amend the existing language for clarity. Regulatory amendments represent a substantial additional resource requirement within the program.

The result of these actions will be the denial of some ground water withdrawal applications for new or expanded withdrawals but will hopefully assure that all existing permits can be reissued for an amount that is equal to the permittees actual existing use of ground water. In taking these actions we will come closer to assuring that permits are only issued in cases where no unmitigated impacts will accrue to existing lawful ground water users.